Eastern Kentucky University

Encompass

Honors Theses

Student Scholarship

Fall 11-28-2022

The Shadow of Fast Fashion: The Quilting Industry

Elizabeth Y. Barnes *Eastern Kentucky University*, elizabeth_barnes27@mymail.eku.edu

Follow this and additional works at: https://encompass.eku.edu/honors_theses

Recommended Citation

Barnes, Elizabeth Y., "The Shadow of Fast Fashion: The Quilting Industry" (2022). *Honors Theses*. 918. https://encompass.eku.edu/honors_theses/918

This Open Access Thesis is brought to you for free and open access by the Student Scholarship at Encompass. It has been accepted for inclusion in Honors Theses by an authorized administrator of Encompass. For more information, please contact Linda.Sizemore@eku.edu.

EASTERN KENTUCKY UNIVERSITY

The Shadow of Fast Fashion: The Quilting Industry

Honors Thesis
Submitted
In Partial Fulfillment
Of The
Requirements of HON 420
Fall 2022

By Elizabeth Barnes

Mentor
Professor Melissa Vandenberg
School of Art & Design

The Shadow of Fast Fashion: The Quilting Industry

Elizabeth Barnes

Professor Melissa Vandenberg School of Art & Design

The purpose behind this creative research project is to bring the contemporary quilting industry to attention when discussing environmental concerns that are typically associated with the textile industry. Quilting, despite its origins in inadvertent conservatism, has evolved into a consumerist business that can be most adequately compared to that of fast fashion. Through analysis of the different types of fibers, manufacturing processes, and environmental implications, an extensive background of the textile was given so that the consequences discussed later in the paper can be fully realized. By comparing examples of need-based quilting, like the quilts of Gee's Bend, to their contemporary counterparts, this project highlights the paradoxical relationship between quilting and the environment. Alongside this research, a breadth of creative works was also made to further highlight the environmental implications of quilting, as well as the textile industry as a whole.

Keywords and phrases: quilting, contemporary quilting, quilting industry, textile industry, sustainability, textile waste.

Table of contents

List of Artworks	1
Acknowledgments	8
Creative Statement	.9
Research	
Introduction	14
Fibers & Textiles	15
Fashion	20
Quilting	24
Conclusion.	33
Bibliography	35

List of artworks

Illustration 1—Sketchbook page, dated 02/05/22.

Mixed media planning sketch on 9-inch by 12-inch paper.

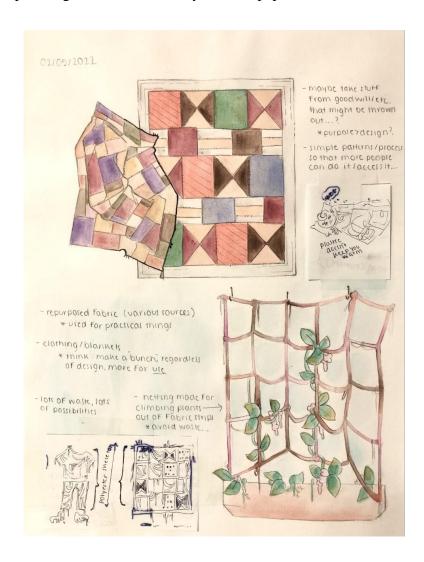


Illustration 2—People with Quilts, dated 02/19/22.

Watercolor painting on 9-inch by 12-inch paper of people with different quilts



Illustration 3 – Fabric Room, dated 02/25/22.

Acrylic painting on 9-inch by 12-inch paper of a cluttered quilting room.



Quilt 1—Fragment.

Painted grocery bags sewn together, roughly 2 feet by 1 foot.



Quilt 2—Dad's Shirts.

Quilt made of various of my father's T-shirts he no longer wanted. Roughly measuring 3.5 feet by 3.5 feet.



Quilt 3 – Tag Quilt.

Scale-styled quilt of different tags from different clothing items.



Quilt 4—Plastic Quilt.

Painted plastic quilt in a pinwheel pattern. Consisting of the top, the batting (bubble wrap), and the backing (more plastic bags). Measures roughly 4 feet by 4 feet.



Acknowledgments

I'd like to thank Professor Vandenberg for her invaluable mentorship on this project—and for reigning me in! This could have been a book! I'm so grateful to have worked with someone so passionate and knowledgeable about textiles and the environment, I can't imagine attempting this with anyone else. The countless time we spent talking about art and threading the sewing machine will definitely stick with me beyond my college career. I am also grateful to the Honors Program here at EKU. It is very bittersweet to be turning in the project that I have spent most of my time in honors preparing for, but I am also so happy to have accomplished this! This is just one of the countless opportunities the Honors Program has given myself and other students, and I can't put into words how much it means to have been part of this truly wonderful program. And finally, I want to thank my family. For the endless support and for letting me pick their brains about family quilts and letting me talk for endless amounts of time about the subject of this paper. I wouldn't have been able to complete this accomplishment without the encouragement from those mentioned, and I hope the encouragement you given me reflects in the quality of this research.

Creative statement

Initially for the creative part of this thesis project I wanted to create a single statement piece that would compliment the research. However, the more I researched the more I wanted to do. I had a sketchbook full of drawing of potential projects, there wasn't just one thing I could commit to that would encapsulate all the research I had done. This was when Professor Vandenberg, my faculty mentor, advised me about the possibility of submitting a breadth of work, and that is what I have done. Though the research aspect of this paper has no mention of the artwork I did, I believe each piece provides unique insight into the topics discussed later in the paper.

Illustration 1 & 2:



These two pieces are from the brainstorming stage—before it was decided that the creative aspect would be a collection of works—so there is a lot of writing and diagrams

of potential projects. I wanted to include Illustration 1 to demonstrate the creative planning process I went through. Everything was considered, that is why there is so much writing, as well as taped on cut outs from other papers. These cut outs usually were small sections and writing that I had wrote down when inspiration struck—usually in the margins of other assignments. I was so excited to create *anything*, many of the pages of the sketchbook are a similar amalgamation of multiple ideas. Illustration 2 is aptly titled "People with Quilts," it is a watercolor painting in the same sketchbook. For this piece, I wanted to display quilts being used, since they are such a staple in everyone's lives. When painting, I was reminiscing about snuggling up in a warm quilt—something that I think is a universal experience.

Illustration 3:



Illustration 3, titled "Fabric Room," is also in the same sketchbook, but I had spent a lot of time planning this piece before painting it. I wanted to make a diagram of a typical

quilting room & hoard of fabric that is usually associated with quilters. I used acrylic paint to make the colors more saturated, hoping to reflect just how colorful the variety of available quilt fabrics are today. Hoarding of fabric, usually called a "stash," is a common practice amongst quilters, and I wanted this painting to provide a visual for the topic that is further discussed in the research paper.

Quilt 1:



This quilt fragment was one of the first steps I took into sewing. I wanted to make a commentary about the growing presence of plastic in fabric—so I took a very literal approach by painting and sewing together blocks from grocery bags. This entire project was done by hand, so it gave me a refresher in sewing and got me familiar with using plastic as a quilting medium. I left some of the grocery bags visible, including the sections reading "please recycle" as well as the logo, because I didn't want to disguise the medium.

Quilt 2 & 3:



Quilt 2, titled "Dad's Shirts," was my foray into more traditional quilting. Each textile used was from unwanted and overused clothing items from my father. I had no plan going into it, I just wanted to highlight the elasticities between the different materials, as there was a mix of synthetic and natural textiles. All the blocks were sewn by hand, some of them involving really intricate small patterning... as well as lots of patience. Many of the materials required the sewing to be reinforced with glue to make sure they didn't unravel. The unorthodox shape also highlights how unforgiving these different materials were—somewhat reminiscent to the quilts of Gee's Bend that are discussed in more detail in the research. Quilt 3, titled "Tag Quilt," is another structurally unorthodox piece. For this, I wanted to highlight the different materials being used in clothing manufacturing, as well as the countries they were made in. I wanted to provide a visual aid to the environment and humanitarian implications of the textile industry, which is discussed further in the research portion. One of the most notable tags in the quilt is that from a pair of Levi jeans. On the inside pocket of the jeans, the company talks about their

history as an American staple...but on another tag from the same pair it's revealed they were made in Mexico.

Quilt 4:



The final, and most time extensive piece in my breadth is Quilt 4, titled "Plastic Quilt." While many of the quilting pieces are just tops and fragments, for this piece I wanted to commit to making a full quilt. Between the top and the back, which was also made from plastic bags, there is a batting of bubble wrap. I used a typical pinwheel pattern and painted each of the blocks with different patterns that are meant to mimic traditional quilting fabric. However, when it came to construction I ran into an unseen problem. The acrylic paint I had used to paint, when sewn together, began to transfer due to tack. When the transfer occurred, the plastic underneath was revealed. While this was unexpected, I believe it portrays how plastic, and thus synthetic textiles, can't fully replace the original natural textiles used in quilting.

The Shadow of Fast Fashion: The Quilting Industry

INTRODUCTION

As the effects of climate change and pollution are being seen in real time, more and more has the conversation turned to wasteful practices encouraged by the culture of consumerism. A topical subject that seems to be the focus of everyone vaguely knowledgeable on environmentalism is that of fast fashion and the expansive textile industry. With the introduction of synthetic fibers and the never before seen scale of production associated with the making of textiles, more are becoming aware of the environmental and humanitarian implications that come with such an industry. But is it just fashion? Or is there another industry with roots in textile that is taking shape to be similar to that of fast fashion? Quilting, while having origins in conservation and the nowaste mindset, is seeing a shift to similar consumerist trends that are typically seen in other businesses. The divergence from traditional quilting practices versus contemporary quilting practices can be witnessed by entering a quilt store and observing how many options are available in comparison to the past. Like many customers shopping on the online retailer Shein, present-day quilters encounter an almost overwhelming number of options to choose from when assembling their quilt. What isn't as well known about quilting as it is fast fashion, is the environmental impact that comes from this change in production.

FIBERS & TEXTILES

In the world of textiles, fibers—which are the threadlike filaments that are woven to textiles—are typically divided into two categories: natural and synthetic. Natural fibers are typically made from resources readily accessible in the natural environment, and synthetic fibers are typically manmade and designed from more elusive materials and chemical processes. While synthetic fibers are a recent development compared to the extensive history associated with natural fibers, there is one thing they share—a negative effect on the environment. At the current stage of mass production, both categories of fibers have damaging effects on the environment in a multitude of ways.

Natural fibers are made from agriculturally grown resources, mainly plant and animal products that are maintained and harvested. There is an abundance of different natural fibers made from different materials with their own histories and unique processes used to make them. Due to the variety, many fibers have different characteristics and uses, which can be attributed to the materials they are made from. Some examples of animal sourced fibers, made from animal products like hair, fur, and secretions, are as follows: silk, wool, sinew. And some examples of plant sourced fibers, made from practically every part of a plant ("leaves, stems, fruits and seeds") (Smole, 2013) are flax, hemp, and cotton. Cotton is the most abundant and thus the dominator of natural fibers, but since the development of synthetic fibers, cotton has found a strong competitor.

Synthetic fibers are also made from more elusive, but nonetheless "naturally" sourced resources like oils and natural gases drilled and usually gathered from below the Earth's surface. However, after the extensive chemical processes used to finalize the fibers, they

can't really be considered "natural" since these reactions wouldn't be found in nature without human interference—hence the moniker "manmade." There is a plethora of different synthetic fibers despite its relatively short history, and like their natural counterparts, each has different uses and different processes of development. Some of the most well-known synthetic fibers are acrylic, nylon, and polyester. As cotton dominates natural fibers, polyester dominates synthetic fibers as 60% of all synthetic fiber production can be attributed to polyester ("Types of Synthetic Fibers," 2021). This is the aforementioned competitor to cotton.

There is reasoning behind cotton and polyester being at the forefront of textile manufacturing. Mainly, both are versatile and sport valuable characteristics that carry into their many products. This paper will focus on a comparison between cotton and polyester as both are the leader of their respective fiber categories. Cotton is utilized so heavily because of its advantageous features compared to other fibers, which consist of being breathable, comfortable, having high absorption (which is good for dyeing), hypoallergenic, and heat resistant. Cotton isn't without its shortcomings; however, it is prone to wrinkling, shrinking, slow drying, prone to mildew, can be eaten by moths, and can also be damaged by sunlight exposure. ("Properties Of Natural Fibres - What Should You Use?," 2020) ("Synthetic and Natural Fibers," n.d.). The reason polyester is so sought after is also because of its many valuable characteristics, such as durability, lightweightness, elasticity, resistance to wrinkling/shrinking/abrasions, it is hydrophobic and thus easy to dry. But like cotton, polyester has its disadvantages: not comfortable, not breathable, less absorption, is highly flammable and can be warped with excessive heat. ("Types of Synthetic Fibers," 2021.). So where one is weak, the other one is strong—but

there is some overlap which makes it understandable as to why cotton and polyester are the majority. These valuable features carry into their products which strengthen their performances—which is what producers and consumers demand.

But strengths and weaknesses are where the similarities of cotton and polyester—as well as natural and synthetic fibers in general—halt. The differences between their production is like night and day. Tokens (2021) describes how cotton is first harvested, the little tufts are called bolls, from the thousands of miles of cotton fields, and then cleaned by removing all excess parts of the plant that were gathered when initially harvested. Next is the process of carding, where the cotton is put through an aptly named carding machine (a roller with teeth) and is pulled through and lengthened so that it can later be spun in either a mill or a machine to make a yarn or thread. And from this, said thread is dyed and woven into practically anything.

The production of polyester is much more complicated in comparison to that of cotton (and other natural fibers). Since polyester is a plastic, one must understand the process of making plastic. As described by the Plastics Industry Association (2017), plastic is made through refining natural gases, oils, or plants into ethane and propane, and then put through a heating process called "cracking." Cracking refines them even further so that they can be combined into different polymers. These polymers are then sold as pellets to be melted and molded into product. In this case it is a fiber, so the pellet is once again heated into a fluid state and put into a spinneret, a tool resembling a shower head, to make a thread. The spinning technique that is used to make polyester is referred to as "melt spinning" (Production Process of Different Synthetic Fibers, 2019.). Afterwards, either while coagulating or already hardened, the thread is drawn and woven together to

make a stronger thicker thread that is then dyed and made into whatever textile product it is being used for.

The difference in production is where the impact on the environment begins. Cotton, although considered natural, does have a bleak effect on the environment due to the amount being farmed and produced. It mainly comes down to water usage. Of all agricultural uses of water, cotton requires the most to sustain. In fact, on average "one kilogram of cotton requires up to 20,000 liters of water" (The Water Consumption Attributable to Cotton Production, n.d.) —and that is still before the fiber is being made. Most of the water used to irrigate this thirsty plant is unusable afterwards due to the pollution runoff from the pesticides and fertilizers used to maintain the crop. This is especially critical since the majority of cotton and its products are cultivated and processed in countries with water insecurity and scarcity issues like India, China, Pakistan, Turkey and even the United States. Producing cotton products requires lots of water and energy. According to the World Wildlife Fund in their article Handle With Care (n.d.) it takes 2,700 liters of water to produce just one cotton T-shirt. This water usage can be attributed to washing and dyeing since cotton is so absorbent, not to mention the contamination of water from dyeing alone. Many dyes contain toxic chemicals, and according to Kant (2012), textile dyeing is the second largest polluter of water behind the agricultural industry. Many of these products also go through chemical treatments during production to strengthen them, and thus causes further runoff and infiltrates the natural water sources that the impoverished communities located nearby use. But still, cotton is more natural than its synthetic counterparts, so once a cotton product is exposed to the elements and thrown away it doesn't stick around. Cotton has a decomposition lifespan of weeks, maybe longer when chemically treated, but it doesn't linger nearly as long as synthetic fiber. Cotton's environmental impact is more from its growth, production, and maintenance, not from its everlasting presence in the environment—that legacy lies with synthetic fibers.

Synthetic fibers are very popular. In fact, "up to 60% of textiles produced globally are synthetic" (Sait, 2021.). The scale of production is very important when recognizing the environmental impact of synthetic textiles. The heat intensive processes used in refining the plastic requires a lot of energy, even more than cotton production, because of the use of heavy machinery. While cotton production has water runoff, synthetic production is known for its airborne emissions that "consist of volatile organic compounds (VOCs), particulate matter, and acid gases such as hydrogen chloride" (Luz, 2007). These emissions are a risk for people living near and working in the factories, as they "can cause or aggravate respiratory disease," (Luz, 2007). Not only are these emissions harmful to the communities that are located around them, they are a detriment to the environment—especially the atmosphere. The gas emissions caused by refining aren't naturally found in the atmosphere since they are usually coming from oil, which is located deep underground. At the current level of mass production these greenhouse gases are an abundant risk to the atmosphere. However, synthetic textile production isn't limited to solely gas emissions, according to DeVoy (2021) there is runoff that also interacts with the groundwater nearby the factories, usually with the same toxic chemicals at the same egregious amounts. But beyond just production, synthetic textiles have an ever-growing negative presence. For reference, during washing and drying, all textiles shed small amounts of fiber, but when synthetic textiles shed, they shed

microplastics. These microplastics can "enter aquatic environments through the waste stream, with the potential to pollute food and human health" (DeVoy, 2021). Polyester, the majority of synthetic textiles produced, has a lifespan of up to 200 years. Meaning, for 200 years the sheds from a polyester textile will breakdown in the environment, interacting with ecosystems that aren't usually exposed to these types of chemicals. The scale of production of synthetic textiles makes it so that this isn't an issue that can be ignored.

FASHION

So, why are textiles being produced at such a high quantity? There are many reasons, but it mainly comes down to the cultural shift to consumerism. "Globalization has made it possible to produce clothing at increasingly low prices, prices so low that many consumers consider this clothing to be disposable" (Luz, 2007). This is the origin of fast fashion. With the constant connection via the internet and television, fashion is constantly changing and is getting more attention than ever. Attention incentivizes demand, and so businesses mass produce these trendy items at low costs using inexpensive materials and labor—mainly synthetic textiles and workers of color in countries with looser labor laws. Trends don't last, and thus attention shifts from trend to trend, which has changed fashion from a 4-season year to a 52-season year. To keep up with the everchanging trends, more purchases of clothing items are encouraged. And people don't hang onto these items for long, to keep up with the demand many corners are cut, and the make of the garment suffers making it deteriorate and only last so long. The United States alone produces over 34 billion pounds of post-consumer textile waste (PCTW) yearly according to DeVoy (2021), which is the textile waste accumulated from products that have been purchased.

66% of that PCTW is sent directly to landfills where it "decomposes producing harmful leachates and greenhouse gases" (DeVoy, 2021.). This doesn't even account for the textile waste that is made in production—there is a lot of that too! Due to faulty production, excess inventory, and improper product handling, product waste is generated (Raian, Shahriar, et al, 2021) in huge amounts.

Synthetic textiles make up most of the fast fashion produced in the present day due to its relatively cheap manufacturing process. This is because the cost of maintaining natural textiles in their agricultural form translates into the cost of buying as a fiber, textile, or other form. Making synthetic textiles doesn't include the timely and expensive process of growing a crop or raising livestock. Instead, like touched upon earlier, all that a manufacturer must do is buy the plastic pellets and put them through the spinning, dyeing, and weaving processes, to make practically any type of synthetic textile product. Because costs are cut by using cheaper products, clothing items from these companies are sold at very low prices—making them accessible to more people. The more trends change, the more people buy, and if the clothes they buy are of low quality due to cut corners, they are more likely to throw them away since they are no longer usable. Most fast fashion is known for the looks, not for the quality. Fast isn't only the name for this type of production, but for how long the garments are worn in exchange for something else—fast and short.

If these clothing items aren't thrown away, many people donate them thinking they will be used by someone else. And sometimes, this is the case. There is a long history of donation shops like Goodwill, church stores, and consignment stores in the United States. These shops facilitate the resale of clothing at a decreased (or at no) cost, usually to those

in need. But that was before clothing manufacturing reached this scale—now Goodwills and quarter stores are bursting at the seams with donated clothing. While this is good, in that those with limited resources have more access to different options... fast fashion donations may not be wearable for long. Beyond this, too many clothing items are being donated, and to not throw away perceived valuable items and maybe to make a profit excess items are sold internationally. According to the documentary The True Cost (2015), only 10% of clothes donated actually get sold in local thrift stores; the rest is usually sent to developing countries. Developing countries are usually identified as countries with lower recorded standard of living, industrialization, and economic center. There is debate on the term "developing" as well as the commonly used "third-world" moniker that implies inferiority. But compared to their "developed" counterparts, according to the United States Environmental Protection Agency (2022), these countries produce less greenhouse emissions—the U.S and China account for 45% of all recorded emissions. Still, these developing countries and communities end up swamped with waste and victimized by the pollution and contamination from textile, and other industries that are outsourced and offshored by economic powerhouses. The countries are believed to have shortages, but in reality, there is no shortage of clothing—"there are more items of clothing than there are people in need" (Jay, 2018.). With this trend of exporting excess clothing—waste—these communities are now dealing with an overabundance of donated clothing. The problem has shifted hands, except that these communities just can't hand it over to someone else. As shown in the video released alongside the article "Here's Where Your Donated Clothing Really Ends Up" by the CBC, the donated clothing ends up being burned to make sure the amount doesn't become unruly, resulting in the release of more

toxic emissions. As synthetic textile products deteriorate in the burn pile, local residents breathe in the pollution. Through our generosity, we wipe out local textile industries in those countries (Jay, 2018) as there is no reason to make clothes locally when there is already an abundance of clothing.

The pollution from farming, dyeing, and manufacturing textile isn't without living and breathing victims. And usually, it's those people that are working in the factories, farms, or living nearby to textile production facilities. The majority of textile production takes place in Asia, because labor costs are much lower and less regulated in comparison to domestic rates."As recent as the 1960s, we (the USA) were making 95% of our clothes. Today we only make 3% and the other 97% is outsourced to developing countries around the world" (*The True Cost*, 2015.). The lax labor laws and regulations are taken advantage of, workplace safety and workers' rights aren't as strictly enforced as they would be in the company's home country. The same mindset extends to environmental laws, it is deemed more acceptable by businesses to pollute offshore as it is less visible to the customer base. Instead of ensuring the environmental health and safety of the communities the production facilities are based in, companies cut costs and pollute out of sight of their clientele. As Andrew Morgan says in his documentary *The True Cost* (2015): Low wages, unsafe conditions, and factory disasters are all excused because of the needed jobs they create for people with no alternatives—this story has become the narrative to explain the way the fashion industry now operates all over the world.

But it is *in* to be green! All these companies really *do* care about the environment!

Haven't you seen the countless advertisement campaigns from these global conglomerates talking about their steps to sustainability and being eco-friendly? They're

even changing their packaging to Earth tones and sage greens to signify it! But is that real? There has been a rise in "greenwashing" amongst major manufacturers in recent years. Greenwashing, first termed by Jay Westerveld in 1986, is "when a company or organization spends more time and money on marketing themselves as being sustainable than on actually minimizing their environmental impact" (Robinson, 2021). As conservation and the effect of mass production has become a major discussion topic, many companies have co-opted this concern into benefitting their profits by putting on a façade of caring for the environment. Especially within fashion, as fast fashion has gained popularity it has also gained a negative reputation for waste that comes from it. Many companies (like Zara and H&M) have developed "sustainable" clothing lines with down-to-earth advertising all the while continuing their horrible practices. What benefits these companies is that sustainability doesn't have a succinct definition when it comes to manufacturing, just like how the term "green" doesn't mean anything, and there is no enforcement on ensuring "eco-friendly" products live up to that standard. Those concerned with the environment and human rights must jump through more hoops when consuming to make sure they don't fall for greenwashing campaigns. This type of deception makes it so that much of the general public does not know the impact of these brands and think by buying "green" coded products they're aiding the environment, when in reality they're unknowingly doing the opposite.

QUILTING

The practice of quilting has extensive historical roots—"the oldest quilted object discovered is a linen carpet, found in a Mongolian tomb, that dates from 100 BCE to 200 BCE" (Roberts, Chiaverini, et al, 2010) —and the craft has only grown since then. The

basis for something to be "quilted" is relatively simple, it is made from two layers of cloth sewn together with a soft material in between, it can be applied to countless things, like carpets, clothing and of course blankets. For the sake of this paper, the focus will be on the first thing that comes to most people's minds when hearing quilt—the colorful and expressive patchwork blankets that are omnipresent in almost everyone's life, plainly called a quilt. The usual quilt has three main layers: the quilt-top, batting, and backing. Sewn together, they make up the blankets that are so commonly passed through families and adorn beds and furniture. The main focus of these quilts are the tops, as they are where designs are expressed and are the most labor-intensive part of the blanket, involving the arrangement of different pieces of fabric into an image or pattern.

The quilt-top is the centerpiece of the quilt. All other decisions about the border and backing are meant to compliment the illustrative and geometric design on the top. What makes the top of the quilt is the pattern. According to Forrest, Blincoe (1995), these patterns are kept on cardboard (sandpaper in recent years) or some other durable material. These designs provide the dimensions and some direction on the arrangement of the top. They can be aesthetically very simple, or extremely complex, as well as having a purpose—such as the celebration of a wedding or the birth of a baby—that impact characteristics of the design. These purposes usually influence the design: wedding quilts usually feature a ring and baby quilts typically feature nursery animals. The reasoning behind these being such common designs and gifts can be sourced from the history of patterns themselves. Pattern sharing amongst communities is a staple of quilting, as well as group quilting for events and just for the sake of quilting. "Most quilters... pass (patterns) around among their fellow quilters during their lifetimes" (Forrest, Blincoe,

1995, p.16). Patterning and quilting are social crafts; it involves collaboration either technically or verbally to execute the design and thus the project. Women, in most cases, would group together in circles and make quilt after quilt, providing guidance to each other to make sure the execution is precise, all the while talking about their lives and craft—these were called quilting circles. Quilting circles are a staple amongst quilters even today and continue to aid the sharing of designs and techniques. What has evolved from this collaboration and communication in smaller communities has grown as technology and methods of communication have developed, patterns have made it to newspapers, books, and stores so that even more quilters can be involved. There are many recognized types of quilts, grouped by the structure and purpose behind the pattern: album quilts, log cabin quilts, themed quilts, crazy quilts, etc.

The pattern, and thus the quilt-top, is broken into design elements such as "the cell, the smallest unit of construction of a quilt" (Forrest, Blincoe, 1995, p.24) usually referred to as a "block." Blocks are just that, the square shapes that make up the design on a quilt-top, however the cell term is a much more inclusive term when it comes to the various types of cells that make up a quilt top. Cells can be very simple or complex, but they are the geometric building blocks to the top of the quilt. More than just the cells, the top involves countless design elements like "sashing, setting material, borders and superadded materials" (Forrest, Blincoe, 1995, p.62) that aid to the piece. But even with these standards many quilters break the mold constantly, either out of necessity or creativity, making it so quilting is not a stagnant and institutionalized practice.

Quilting is a very practical craft, the way of assembly gives opportunity for a variety of designs, as well as textiles. This accessibility of materials helps make quilting so

widespread as a practice, since it gives people from all walks of life the ability to make something useful, especially those in need. As touched upon before, the construction of a quilt consists of a quilt-top, batting, and a backing. To make any one of these, a variety of textiles and batting materials can be used. While the creativity and subversion of quilting expectations is always interesting, the medley of different types of textiles is often rooted in poverty and the aversion to wasting anything of value. People would make-do with anything they had available to them, utilizing scraps of other heavily used items to make a quilt that they can use for many different purposes. These are aptly named 'scrap quilts.' But don't let the name fool you, the appearances of these quilts are usually anything but scrappy. Many of the quilts made from scraps are passed down through families, carrying stories of the origin from each different piece of fabric and making the blanket much more sentimental. The standard of using what is at hand has led to some rather unusual materials and designs being used and made, a prime example of this being the quilts originating from Gee's Bend, Alabama.

Gee's Bend, also known as Boykin, Alabama is a town located on the banks of a peninsula carved out by the Alabama River with a population of around 750 residents (Gee's Bend, n.d.). It is isolated from other city centers due to being so far into the 'bend' of the river as the town was originally a cotton plantation, containing vast acres of land that is now inhabited by the descendants of the enslaved peoples brought there. Many of the inhabitants of Gee's Bend still carry the name Pettway from the Pettway family who owned the plantation until selling it in 1895, where many of the enslaved peoples continued to work "as sharecroppers and tenant farmers" (Gee's Bend, n.d.). Even after emancipation, the town dealt with continuous problems of poverty, causing the

inhabitants to be faced with abject standards of living. "Gee's Bend was determined to be the poorest area in the country" (Quiltmakers of Gee's Bend, 2004) during the Roosevelt administration. This experience and mindset especially extended to the women of the family, who in addition to working jobs, were also in charge of maintaining the household—causing them to become very creative when it came to keeping their family healthy with little to no outside resources. When a Sears, Roebuck Co. manufacturing factory partnered with the Freedom Quilting Bee initiative in the area to make corduroy pillows covers, members of the community saw an opportunity as "leftover lengths and scraps of corduroy were taken home by workers at the Bee. Given to friends and family or bundled for sale within the community, the scraps were then transformed from standardized remnants into vibrant and individualized works of art" (Sears Corduroy, n.d.). These weren't typical quilts; the makeup of the textiles led to warping and unorthodox appearances due to the different elastic analysis compared to the other scraps used with them. The resulting quilts were not the most "comfortable," but the women and their families set out to use them in any conceivable way possible.

The radical designs that came from these circumstances adorned every surface of households of Gee's Bend, they were used as blankets, carpets, drop-cloths, and just hangings. Women taught their learned techniques of wrangling in the synthetic scraps and remnants of worn clothing to their daughters—as it was a valued skill in their community. In the documentary *Gee's Bend: From Quilt to Print* (n.d.) Louisiana Bendolph, a quilter in the community, says she made her first quilt when she was twelve, "It was really cold, and so it was something that was done because we needed it." There were no set standard of design or traditional pattern employed, only the understanding to

use whatever could be used in the arrangement of a quilt top or backing. The visuals that came from the execution of this shared mindset had never been seen before in the world of quilting. The need that spurred the making of these quilts also developed a new aesthetic in textile crafts. Once cultural and historical institutions brought the women of Gee's Bend and their craft to broader mainstream audiences via "blockbuster" exhibitions, the quilts and their makers became (and still are) some of the most popular collections in the world of textile art. Now names like Annie Mae Young, Arlonzia Pettway, Mary Lee Bendolph, Loretta Pettway, and Nancy Pettway are well known names in the textile art field due to the quilts they made to keep their families warm. The first exhibit, titled "The Quilts of Gee's Bend" was held at the Houston Museum of Art in 2002, showing quilts ranging from the 1930's to the time of the exhibit. It brought so much acclaim to the quiltmakers and their community that there are still touring collections of work. Now the women are making quilts to sell as fine art. What was once sold amongst neighbors for upwards of five dollars, as told by Mary Lee Bendolph in the documentary Quiltmakers of Gee's Bend (2004), are now reaching prices in the near ten thousand dollars. The quilts of Gee's Bend provide a great example of how the practicality of quilting connects many types of people and doesn't sacrifice artistry. The craft "which was passed down and treasured within a family—its sentimental value independent of its valuation in the art world" (Thompson, 2022.). The women of Gee's Bend made artwork that still served a purpose—just as many others have and still do. Inadvertently, like many other quilters of the past, the women participated in conservation of materials as that's where quilting found its origin. The re-use of no

longer wearable clothing and scraps was encouraged, to make something new that could be used, giving life to the materials once again.

But this hasn't continued to be the case. Like mentioned earlier with clothing, technological advancements have made it so that fabric made for quilting is faster and easier to produce, thus making its prices lower. Lower prices make it so that these materials are more accessible to a wider audience but has caused quilting to diverge from its beginnings of making a blanket to keep warm—now quilting is an industry similar to fashion. Where once quilters pulled together remnants of previous clothing items and feedbags, now they can choose from articulated designs made by powerhouse manufacturers in the industry. If you approach a quilter, chances are they will recognize the names of the biggest brands, like Moda, Wilmington, Robert Kauffman, and Timeless Treasures. Similar to the likes of Zara and H&M when it comes to fast fashion, these quilting companies set the standards of the business, and what is made by quilters is usually influenced by them. Anything imaginable has found its way to being printed on quilt fabric, whether zany or traditional. Companies take advantage of their control in the relatively isolated market to decide what is in and out, releasing fabric to their benefit. It is anything but mindless, these companies will design fabric with similar color schemes and motifs that connect so it can be sold in pre-cuts (which are pieces of fabrics cut in advance in specific measurements—usually as fat quarters, charm squares, or jelly rolls—for the convenience of the buyer) and kits. Quilt-kits themselves are another form of pre-cuts, where the kit includes measured cuts of the different fabrics in a collection that coincide with a pattern that is designed to go along with them. Where the design of a quilt top was once left to the quilter to configure, now it can be bought and assembled

without an ounce of personal expression. It is like when a fashion company releases their own collection of clothing, allowing their customers to mix and match amongst the different items but only staying within that collection.

In fact, as Gee's Bend's touring exhibits gained more and more attention the quilt company Windham Fabric saw an opportunity. On their website, patterns imitating some of the most popular quilts from Gee's Bend can be found, designed in collaboration with the Gee's Bend Quilters Collective, alongside kits for said patterns. But for a quilt-kit, there must be fabric! So, Windham has taken to making a collection of solid-esque fabrics meant to imitate the scraps used to make the iconic quilts. They made fabric to look like the worn clothing and corduroy scraps that were so commonly found in the quilts of Gee's Bend. Is that not a little paradoxical to mass produce a collection of quilting fabric named after a group of quilters who notoriously didn't use quilt fabric? Would it not be more authentic for these quilts to be made from the scraps a quilter had on hand, like the women of Gee's Bend did?

This retail collection, and most others are made in abundance to fulfill the demand created by quilters. There is a common joke amongst those involved in the craft about hoarding— "quilters collectively refer to their collections as "fabric stash," hoard fabric over time, and together strategize hiding places for the fabric stash in their homes" (Stalp, 2006.). Because of the constant introduction of new fabrics, the quilting business appears to be similar to that of fast fashion where there is a sense of "exclusivity" that if a quilter were not to buy a fabric, they would miss their chance to have it to make something out of at a later date. As said by Marybeth Stalp in her writing Hiding the [Fabric] Stash: Collecting, Hoarding, and Hiding Strategies of Contemporary US Quilters (2006): fabric

companies produce particular designs by season, and most stores have a limited supply of any given fabric, which essentially holds quilters hostage if they run out of an essential fabric in a quilt. This relationship between manufacturer and customer only encourages the production of more fabric, as it translates into demand since the fabric barely stays on the shelf, these businesses don't consider that their fabric isn't being used—rather it's more of an incentive since it makes more profit. In fact, "according to the 2017 Quilting in America survey, there are more than 7 million quilters in the United States, and the average quilting household spends more than \$440 annually on the craft. Overall, quilters spend approximately \$3.7 billion a year on their passion" (Hansen, 2018) so it is safe to say the model is sustainable in terms of business. As it ends up, many quilters end up with new fabrics in their stash, "rather than scraps of family clothing" (Stalp, 2006) as it has been so in the past.

These quilting fabrics are made from many of the same processes that make typical cotton garments. They come from the same fields, soak in the same pesticides that destroy local ecosystems and are treated with the same chemicals for the same valuable characteristics and strengths. The impact of the scale of production and farming of cotton mentioned earlier can be linked to a demand for quilting fabrics, just as it has fast fashion. And it isn't just the textiles that are following the standards set by fast fashion, things like batting and quilting notions are also changing. Batting, the insulation that is between the back and quilt-top, was traditionally made from cotton or wool, however there has been a rise in polyester or poly-blend batting. This can be linked to the lower prices associated with polyesters and the speed at which it can be produced—so now it is seen as an alternative to cotton or wool batting. Quilting notions, which most commonly

consist of thread, scissors, rulers, needles, and other tools used in quilting, were originally made from different materials, but now are overshadowed by plastic alternatives. Thread, while still dominated by cotton, has seen a rise in polyester alternatives, all the while the holsters for the thread are now almost always made from plastic. Rulers were once wood and metal, but now it's harder to find anything but plastic. And of course, the packaging for all these notions are single-use plastics... just polyester rooting itself in another form.

CONCLUSION

Quilting has an extensive history of both practical and creative use, but one thing that has remained a constant until recent was the sense of conservation that came with it. Whether it was salvaging fabric from threadbare clothing or just an item that wasn't worn to begin with—quilting was used to give obsolete clothing and other materials a new life. Comparing this origination to the industry associated with it presently, there is a major disconnect between the business and the culture associated with the craft. Quilting's popularity will never dwindle, as it such a constant in so many lives, but most are unaware of how much it has changed, as well as how paradoxical the relationship with the environment and quilting has become. When people address concern for the environment and humanitarian conflicts, the textile industry is always a hot topic especially when it comes to fast fashion. But in these discussions quilting is constantly overlooked due to the association that most have with the craft—that quilts are made from old fabric, not new. To address the sustainable implications that come with quilting as an industry, the change in its business and production practices must be acknowledged, and quilting must be viewed as business that has practices similar to those associated with fast fashion. Consumerism has begun to beat out the conservatism associated with the craft, and it won't be long before bolts of designer quilting fabric find their way into landfills just as their fashion counterparts have.

Bibliography

- Alabama Public Television Documentaries | *Quiltmakers of Gee's Bend*. (2004).

 Www.pbs.org. https://www.pbs.org/video/alabama-public-television-documentaries-quiltmakers-of-gees-bend/
- Chave, Anna C. "Dis/Cover/Ing the Quilts of Gee's Bend, Alabama." Journal of Modern Craft, vol. 1, no. 2, July 2008, pp. 221–53.
- Claudio, Luz. "Waste Couture: Environmental Impact of the Clothing Industry."

 Environmental Health Perspectives, vol. 115, no. 9, Sept. 2007, pp. A448–54.
- Clothes recycling: Investigating where clothing ends up (The Investigators with Diana Swain). (2018). [YouTube Video]. In YouTube.

 https://www.youtube.com/watch?v=JHhD3zb-uQY
- DeVoy, Julia E., et al. "Post-Consumer Textile Waste and Disposal: Differences by Socioeconomic, Demographic, and Retail Factors." *Waste Management (New York, N.Y.)*, vol. 136, Dec. 2021, pp. 303–09.
- Forrest, John, and Deborah Blincoe. The Natural History of the Traditional Quilt.

 University of Texas Press, 1995.
- Gee's Bend. (n.d.). Encyclopedia of Alabama.

 http://encyclopediaofalabama.org/article/h-1094
- Handle with Care | Magazine Articles | WWF. (n.d.). World Wildlife Fund.

 https://www.worldwildlife.org/magazine/issues/spring-2014/articles/handle-with-care

- HANSEN DENEGRE, V. (2018). Quilting is Big Business. Modern Patchwork, 12–16.
- Jay, P. (2018, May 29). Here's where your donated clothing really ends up. CBC.

 https://www.cbc.ca/news/canada/ottawa/donated-clothing-where-it-ends-up-1.4662023
- Kant, R. (2012) Textile dyeing industry an environmental hazard. Natural Science, 4, 22-26. doi: 10.4236/ns.2012.41004
- Lisa. (2020, July 13). Properties Of Natural Fibres What Should You Use? Modern Elegance. https://modern-elegance-style.com/properties-of-natural-fibres/#:~:text=Properties%20of%20Natural%20Fibres%20%E2%80%93%20Cotton%201%20Hypoallergenic
- (n.d.). *Gee's Bend: From Quilt to Print* (M. Dunn & C. White, Eds.) [Documentary of Gee's Bend: From Quilt to Print].
- Plastics Industry Association. (2017, July 12). How Are Plastics Made? This Is Plastics. https://thisisplastics.com/plastics-101/how-are-plastics-made/
- Production Process of Different Synthetic Fibers VNFIBER | Recycled Polyester Staple
 Fiber (PSF) | Viet Nam. (2019, December 5). VNFIBER | Recycled Polyester
 Staple Fiber (PSF) | Viet Nam. https://vnfiber.com/production-process-of-different-synthetic-fibers/
- Raian, Shahriar, et al. "Assessing Sustainability Risks in the Supply Chain of the Textile Industry under Uncertainty." *Resources, Conservation & Recycling*, vol. 177, Feb. 2022, p. N.PAG.

- Roberts, Chiaverini, et al. (2010). *The Quilt: A History and Celebration of An American*Art Form. Voyageaur Press/ Minneapolis Mn.
- Robinson, D. (2021, July 23). Greenwashing: What is it, Why is it a Problem, and How to Avoid It. Earth.org Past | Present | Future. https://earth.org/what-is-greenwashing/
- Sait, Shannen T. L., et al. "Microplastic Fibres from Synthetic Textiles: Environmental Degradation and Additive Chemical Content." *Environmental Pollution*, vol. 268, Jan. 2021.
- Sears Corduroy | Souls Grown Deep. (n.d.). Www.soulsgrowndeep.org. Retrieved

 November 14, 2022, from https://www.soulsgrowndeep.org/quiltcategories/sears-corduroy
- Smole, M. S., Hribernik, S., Kleinschek, K. S., & Kreže, T. (2013). Plant Fibres for Textile and Technical Applications. In S. Grundas, & A. Stepniewski (Eds.), Advances in Agrophysical Research. IntechOpen. https://doi.org/10.5772/52372
- Stalp, Marybeth C. "Hiding the [Fabric] Stash: Collecting, Hoarding, and Hiding Strategies of Contemporary US Quilters." Textile: The Journal of Cloth & Culture, vol. 4, no. 1, Spring 2006, pp. 104–24.
- Synthetic Fibres And Natural Fibres. (n.d.). VEDANTU.

 https://www.vedantu.com/chemistry/natural-fibres-and-synthetic-fibres
- (2015, May 29). *The True Cost* (M. Ross, Ed.) [Documentary The True Cost]. Life is My Movie Entertainment

- The Water Consumption Attributable to Cotton Production Sustainable Fashion. (n.d.).

 https://sustainfashion.info/the-water-consumption-attributable-to-cotton-production/
- Thompson, A. (2022). Fabric of a Nation: American Quilt Stories. Journal of Modern Craft, 15(2), 225–230. https://doi-org.libproxy.eku.edu/10.1080/17496772.2022.2093040
- Tokens, A. E. (2021, May 26). How Is Cotton Made Into Fabric? The Creative Curator. https://www.thecreativecurator.com/how-is-cotton-made-into-fabric/
- Types of Synthetic Fibers. (2021, July 10). GeeksforGeeks.

 https://www.geeksforgeeks.org/types-of-syntheticfibers/#:~:text=Types%20of%20Synthetic%20Fibers%20Synthetic%20fibers%20
 find%20their
- United States Environmental Protection Agency. (2022, February 25). Global

 Greenhouse Gas Emissions Data. US Environmental Protection Agency.

 https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data.